

# PD7 Series

Digital Portable Radio



# radiotronics



- 5 Mode operation for future proofing
- Superior audio quality with advanced feature set
- GPS Option and Integration with Data Applications
- Emergency, lone-worker and man-down options

PD785

PD705

PD755



## PD7 Series

Hytera's PD7 Series is built to the DMR Standard and is rich in both voice and data features. The design of the PD7 is approved to rigorous IP67 and MIL-STD 810 testing. This ensures the radio is robust and reliable, giving it's user complete peace of mind.

The PD7 also offers 5 mode operation. With the relevant firmware and licenses it is capable of analogue conventional, DMR convention, XPT digital trunking, MPT1327 trunking and DMR Tier III trunking modes. This means that your radio is future proofed and will continue working on your radio system infrastructure as it grows and evolves. Key features such as vibration, dedicated emergency button, and the large colour display make the PD7 an ideal solution for mission- critical communications. The PD7 offers also lone-worker features as standard with GPS and man-down as options for enhanced user safety.

## Applications

Public Safety

Utilities

Forestry

Manufacturing

Transportation

Security

Healthcare



# Product Features

- User Friendly Design**

The large colour display of the PD7 provides excellent visibility even when viewed in extremely strong light. The globally patented industrial design of the radio and antenna ensure convenient operation and remarkable GPS performance.
- Rugged & Reliable**

The Hytera PD7 series complies with MIL-STD-810 C/D/E/F/G standards. The Ingress Protection reaches IP67 (6: Totally protected against dust; 7: Protected against the effects of immersion up to 1m for 30 minutes). It's the highest IP level for a land-based wireless radio application.
- Superior Voice**

With the adoption of the AGC technology in combination with the application of narrowband codec and digital error correction technologies, The PD7 Series radios are capable of ensuring your voice is clear and crisp even in noisy environments or at the edge of the coverage area.
- Higher Spectrum Efficiency, Higher Channel Capacity**

The TDMA technology allows twice the channels based on the same spectrum resource. This relieves the stress of increasing shortage in spectrum resource.
- Secure Communication**

Besides the encryption inherent to digital technology, The PD7 Series radios provide enhanced encryption capabilities (such as 256-bit encryption algorithm). It has analogue scrambling, and digital encryption using Advanced Encryption Standard (AES) and ARCFOUR (ARC4) encryption methodology to both voice and data.)
- Roaming**

Automatic roaming between sites in a Hytera IP multisite connect system.
- Vibration**

Vibration alerts the user of voice calls and text messages.
- Scan**

Capable of scanning of pure analogue voice and signaling, pure Digital voice and data, and also mix mode scan that comprises of Analogue and Digital activities.
- GPS Positioning**

The PD785G/PD755G supports viewing of GPS positioning information and sending of GPS text message.
- 5 Mode Operation**

With the relevant firmware and licenses, the Hytera PD7 series can work in analogue, digital conventional, MPT1327 trunking, XPT digital trunking and DMR Tier III trunking modes. This is done via simple software upgrade with no additional hardware.
- Various Analogue Signaling Types**

Various analogue signalling types (HDC1200, DTMF phone, 2-Tone and 5-Tone), various squelch control types (CTCSS/CDCSS) are supported, thus providing higher functionality expansion capacity to the analogue world.
- Versatile Voice Calls**

The intelligent signaling of the PD7 series radios supports various voice call types including Private Call, Group Call, All Call and Emergency Call.
- Multifaceted Features**

In addition to conventional voice communication services, the PD7 series are capable of Text Messaging, Scan, Emergency, Man-Down (optional), Auto Registration, High-speed Data, Transmission, Lone Worker, Radio Check, Remote Monitor, Call Alert, Radio Enable and Radio Disable.
- Expansion Ports**

This allows third parties to develop accessories and applications via front and rear port of the mobile. (Features such as voice recording, encryption).
- One Touch Call/Text**

Supports One Touch features that comprise of Preprogrammed Text Messages, Voice Calls and Supplementary Features
- Pseudo Trunk**

This virtual trunking feature allocates a free timeslot for urgent communications. This effectively enhances frequency efficiency and allows you to communicate in a timely manner in emergency situations.
- Data Features**

The PD785 and PD755 portables are capable of sending private and group text messages. It also allows 3rd party application partners to control the radio via third party API (GPS, Radio Registration Services, Radio Call Control, Telemetry, Data Transfer) via Telemetry control to radio.

## Accessories

### Included

- Li-Ion Battery
- MCU Rapid-rate Charger
- Power Adapter
- Antenna
- Belt Clip
- Leather Strap

See website for full list

Optional



Remote Speaker  
Microphone (IP57)  
SM18N2



MCU Multi-Unit Charger  
(For Thick Battery)  
MCA08



Programming Cable  
(USB Port)  
PC38



Earset  
Swivel  
EHN17

# Specifications

General	Frequency Range (VHF and UHF3 only PD705/ PD785)	VHF 136-174MHz; UHF1 400-470MHz, UHF 2 450-520MHz	
	Channel Capacity	PD705	32
		PD785 PD755	1024
	Zone Capacity (each with a maximum of 16 channels)	PD705	3
		PD785 PD755	64
	Channel Spacing	25 / 20 / 12.5KHz	
	Operating Voltage	7.4V (rated)	
	Standard Battery	2000mAh (Li-Ion)	
	Battery Life (5-5-90 Duty Cycle, High TX Power) (Range of hrs depends on Frequency and GPS)	Analogue	Approx. 8 - 12hrs
		Digital	Approx. 11 - 15hrs
	Frequency Stability	± 0.5ppm	
	Antenna Impedance	50 Ω	
	Dimensions (HxWxD)	PD705	124 x 55 x 35 mm (approx)
PD785 PD755		124 x 55 x 37 mm (approx)	
Weight	PD705	335g	
	PD785 PD755	354g	
LCD Display (PD755/PD785)	160 128 pixels, 65535 colors 45mm, 4 rows		

Environmental Specs	Operating Temperature	-30° C ~ +60° C
	Storage Temperature	-40° C ~ +85° C
	ESD	IEC 61000 - 4 - 2 (level 4) ± 8kV(contact) ; ± 15kV (air)
	American Military Standard	MIL-STD-810 C/D/E/F/G
	Dust & Water Intrusion	IP67 Standard
	Humidity	Per MIL-STD-810 C/D/E/F/G Standard
	Shock & Vibration	Per MIL-STD-810 C/D/E/F/G Standard

GPS	TTFF (Time To First Fix) Cold Start	<1 minute
	TTFF (Time To First Fix) Hot Start	<10 seconds
	Horizontal Accuracy	<10 meters

Transmitter	RF Power Output	VHF: High 5W - Low 1W UHF: High 4W - Low: 1W
	FM Modulation (Analog Emissions Designator)	11K φF3E @ 12.5KHz; 14KφF3E @ 20KHz; 16KφF3E @ 25KHz
	4FSK Digital Modulation (Digital Emissions Designator)	12.5KHz Data Only: 7K6 FXD 12.5KHz Data & Voice: 7K6 FXW
	Conducted/Radiated Emission	-36dBm<1GHz -30dBm>1GHz
	Modulation Limiting	± 2.5KHz @ 12.5KHz; ± 4.0KHz @ 20KHz; ± 5.0KHz @ 25KHz
	FM Hum & Noise	40dB @ 12.5KHz; 43dB @ 20KHz; 45dB @ 25KHz
	Adjacent Channel Power	60dB @ 12.5KHz 70dB @ 20/25KHz
	Audio Response	+1 ~ -3dB
	Audio Distortion	≤ 3%
	Digital Vocoder Type	AMBE++ or SELP
Digital Protocol	ETSI-TS102 361-1, 2&3	

Receiver	Sensitivity	Analogue	0.22 μ V (12dB SINAD) ; 0.22 μ V (Typical) (12dB SINAD); 0.4 μ V (20dB SINAD)
		Digital	0.22 μ V/BER5%
	Selectivity TIA-603 ETSI	60dB @ 12.5KHz / 75dB @ 20/25KHz 60dB @ 12.5KHz / 70dB @ 20/25KHz	
	Intermodulation TIA-603 ETSI	70dB @ 12.5/20/25KHz 65dB @ 12.5/20/25KHz	
	Spurious Response Rejection TIA-603 ETSI	70dB @ 12.5/20/25KHz 70dB @ 12.5/20/25KHz	
	Blocking TIA-603 ETSI	80dB 84dB	
	S/N	40dB @ 12.5KHz; 43dB @ 20KHz; 45dB @ 25KHz	
	Rated Audio Power Output	0.5W	
	Rated Audio Distortion	≤ 3%	
	Audio Response	+1 ~ -3dB	
Conducted Spurious Emission	< -57dBm		



[www.radiotronics.co.uk/hytera](http://www.radiotronics.co.uk/hytera)

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